

NASA Solar Terrestrial Probes (STP) and Living With a Star (LWS) Education and Public Outreach Program Overview

1.0 INTRODUCTION AND PROJECT OVERVIEW

The NASA Solar Terrestrial Probes (STP) and Living With a Star (LWS) Programs represents a significant opportunity for ground breaking public/educational outreach in the fields of solar science, information technology, engineering studies and the solar system. These programs are part of NASA's Office of Space Science (OSS) Sun-Earth Connection (SEC) Theme, whose primary goal is "to understand our changing Sun and its effects on the Solar System, life and society." The program constitutes an ambitious in-depth look at space weather and solar science with implications for improving life on Earth, space exploration and vastly increasing our understanding of star system processes.

The SEC strategy for understanding the Sun-Earth system is organized around four primary Quests. Each Quest focuses on one specific element but the questions are

1. Why Does the Sun Vary?
2. How Do the Planets Respond to Solar Variability?
3. How Do the Sun and Galaxy Interact?
4. How Does Solar Variability Affect Life and Society?

The STP and LWS programs investigate all of these aspects with an innovative array of missions that address important gaps in our current understanding of solar science.

2.0 The STP/LWS Education and Public Outreach Overview

Every effort will be made to initiate programs that adhere to Education and Public Outreach (E/PO) guidelines set forth by OSS. This includes E/PO efforts for formal and informal education and public outreach. The STP/LWS Education and Public Outreach (E/PO) program will promote excellence in science, mathematics, engineering, and technology education through direct involvement in partnerships, workshops, internships, and as participants/observers. Most programs lend themselves to nationwide participation with special emphasis on serving groups historically underrepresented in space sciences.

These programs represents a unique opportunity to involve both the public and the educational community in an important long-term program that will investigate complex science issues, the results of which affect each and everyone of us in our daily lives. The Sun is the engine that drives our solar system, fuels our planet, and has created an environment conducive to the evolution of life. In addition, each of the LWS missions involves significant advances in information technology systems and their use in space science. As technology advances the public, educational institutions and science

facilities will be able to utilize the STP and LWS mission data to enhance their knowledge and programs.

The main goal of the STP/LWS Education and Public Outreach program is to provide the tools and means necessary to enhance public awareness and knowledge of the Sun, its affect on the Earth, and consequently its affect on all aspects of human life, and to communicate the realization that the Sun-Earth connection is vital to the continuance and quality of their future.

3.0 STP/LWS E/PO Architecture

The STP/LWS E/PO program has developed a multi-tiered level of support for the accomplishment of their E/PO efforts. This approach incorporates a comprehensive and unified structure, with emphasis on outreach efforts at both the program and mission levels. An STP/LWS program E/PO Manager will have oversight responsibilities of the E/PO program, including coordination of mission level efforts and to insure quality and consistency of the program. The primary focus of the program level E/PO is formal and informal educational development.

3.1 Mission/Project E/PO efforts

Each of the STP and LWS missions will implement an Education and Public Outreach program. To facilitate the coordination effort, each Principal Investigator will designate a single point of contact responsible for E/PO activities. These persons will collaborate with mission scientists and engineers to generate E/PO products pertinent to their mission's science and to promote visibility of their mission with the general public. The mission coordinator will work closely with the program level E/PO Manager to share resources and avoid duplication of effort.

Emphasis for outreach efforts at both the program and mission levels will include a variety of traditional materials such as, CD-ROMs and videos that will inspire and inform. Traditional avenues of conference participation, public event participation and dissemination of information through schools, teacher workshops, and pre-service programs will be pursued.

3.3 Coordination with NASA's Office of Space Science (OSS)

Close cooperation between STP/LWS Education and Public Outreach effort and NASA's OSS activities is imperative to ensure maximum effectiveness and consistency. The STP/LWS Program staff at GSFC will provide the support to coordinate the efforts between the missions, NASA Headquarters and GSFC.